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Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Substantive recommendations to the third session of the Preparatory Committee and the 2010 Review Conference

Working paper submitted by the Group of Non-Aligned States parties to the Treaty on the Non-Proliferation of Nuclear Weapons

I. Introduction

1. The third session of the Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons is meeting to consider specific matters of substance related to the implementation of the Treaty as well as the commitments and undertakings agreed by consensus at the 1995 Review and Extension Conference and the 2000 Review Conference.

2. In accordance with decisions of the 2000 Review Conference, the third session of the Preparatory Committee is mandated to make every effort to produce a consensus report containing recommendations and to finalize procedural arrangements for the 2010 Review Conference.

3. Building on the working papers presented by the Group of Non-Aligned States parties to the Non-Proliferation Treaty at the first and second sessions of the Preparatory Committee, the present working paper represents the Group's inputs to be considered by the Preparatory Committee as recommendations to the 2010 Review Conference.

II. Procedural and other arrangements pertaining to the Preparatory Committee and 2010 Review Conference of the parties to the Non-Proliferation Treaty

4. The third session of the Preparatory Committee is mandated to consider matters of substance pertaining to Treaty implementation and decisions 1 and 2 and

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the resolution on the Middle East adopted in 1995[1] and the outcomes of subsequent review conferences, including developments affecting the purpose and operation of the Treaty (see the Final Document of the 2000 Review Conference[2]) and to produce a consensus report containing substantive recommendations to the 2010 Review Conference, taking into account the deliberations and results of the previous sessions.

III. Recommendations pertaining to the principles and objectives of the Non-Proliferation Treaty

Basic principles and objectives

Recommendation 1

To emphasize that the Non-Proliferation Treaty is the key international instrument aimed at halting the vertical and horizontal proliferation of nuclear weapons, achieving nuclear disarmament and promoting international cooperation in the peaceful uses of nuclear energy.

Recommendation 2

To reaffirm that the balanced implementation of the three pillars of the Non-Proliferation Treaty, in a non-discriminatory manner, remains essential for the effectiveness of the Treaty in realizing its objectives.

Recommendation 3

To reiterate that the continued existence of nuclear weapons represents a significant threat to humanity and that the full and effective implementation of all Treaty obligations, including in particular by nuclear-weapon States, plays a crucial role in promoting international peace and security.

Recommendation 4

To reaffirm that each article of the Treaty is binding on States parties without distinction, and that States parties are required to comply strictly with their obligations under the Treaty as well as with those agreed by consensus at the review conferences of the Treaty, including, in particular, the 1995 Review and Extension Conference and the 2000 Review Conference.

Nuclear disarmament

Recommendation 5

To reconfirm that negotiations on a fissile material treaty should be conducted on the basis of the Shannon mandate, as endorsed both at the 1995 Review and Extension Conference and the 2000 Review Conference.

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[1] *1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, Part I* (NPT/CONF.1995/32 (Part I) and Corr.2), annex.

[2] *2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document*, vols. I-III (NPT/CONF.2000/28 (Parts I-IV)).

Recommendation 6

To reaffirm the importance of the application of the principles of transparency, verifiability and irreversibility by nuclear-weapon States in all measures relating to nuclear disarmament.

Recommendation 7

To voice concern about the potential for an arms race in outer space, in which the implementation of a national missile defence system could trigger an arms race and further nuclear proliferation.

Recommendation 8

To agree that the development of new types of nuclear weapon and new targeting options to serve aggressive counter-proliferation purposes and the lack of significant progress in diminishing the role of nuclear weapons in security policies undermine disarmament commitments and work counter to the letter and spirit of the Treaty.

Nuclear testing

Recommendation 9

To reaffirm that the only way to rid the world of the threat of use of nuclear weapons is their total elimination. In this regard, the Comprehensive Nuclear-Test-Ban Treaty is a practical step on the road to nuclear disarmament and, therefore, cannot substitute for the objective of complete elimination of nuclear weapons.

Recommendation 10

To support the objective of the Comprehensive Nuclear-Test-Ban Treaty, which is intended to enforce a comprehensive ban on all forms of nuclear tests without exception, and to stop the development of nuclear weapons, in the direction of total elimination of nuclear weapons.

Recommendation 11

To realize the objectives of the Comprehensive Nuclear-Test-Ban Treaty, the commitment to nuclear disarmament of all States signatories, especially the five nuclear-weapon States, is essential. The five nuclear-weapon States have a special responsibility to take the lead in making the test ban a reality.

Security assurances

Recommendation 12

To recall that at the 2000 Review Conference, States parties to the Non-Proliferation Treaty had agreed, by consensus, that legally binding security assurances by the five nuclear-weapon States to the non-nuclear-weapon States parties to the Treaty strengthen the nuclear non-proliferation regime.

Recommendation 13

To reiterate that the improvement in existing nuclear weapons and the development of new types of nuclear weapon as envisaged in the existing nuclear doctrines of some nuclear-weapon States, including a certain State's nuclear posture review, contravene the security assurances provided by the nuclear-weapon States and violate the commitments undertaken by them at the time of the conclusion of the Comprehensive Nuclear-Test-Ban Treaty.

Recommendation 14

To reaffirm that the total elimination of nuclear weapons is the only absolute guarantee that there will be no use or threat of use of nuclear weapons and that non-nuclear-weapon States should be effectively assured by nuclear-weapon States that there will be no use or threat of use of such weapons. Efforts to conclude a universal, unconditional and legally binding instrument on security assurances to non-nuclear-weapon States should be pursued as a matter of priority.

Nuclear-weapon-free zones

Recommendation 15

To welcome the efforts aimed at establishing nuclear-weapon-free zones in all regions of the world and call for cooperation and consultations in order to achieve agreements freely arrived at among the States of the regions concerned.

Recommendation 16

To welcome the ongoing consultations between the Association of Southeast Asian Nations and the nuclear-weapon States on the Protocol to the Treaty on the South-East Asia Nuclear-Weapon-Free Zone (Bangkok Treaty) and urge the nuclear-weapon States to become parties to the Protocol to that Treaty as soon as possible.

Recommendation 17

To stress the importance of the signature and ratification of the South Pacific Nuclear-Free-Zone Treaty (Rarotonga Treaty), the African Nuclear-Weapon-Free-Zone Treaty (Pelindaba Treaty), and the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Semipalatinsk Treaty), as well as Mongolia's nuclear-weapon-free status, by all States in their respective regions, as well as signature and ratification by the nuclear-weapon States that have not yet done so of the relevant protocols to those treaties.

Recommendation 18

To welcome the talks by Mongolia with its two neighbours to conclude the required legal instrument institutionalizing Mongolia's nuclear-weapon-free status.

Regional issues: Middle East

Recommendation 19

To welcome the efforts aimed at establishing a nuclear-weapon-free zone in the Middle East and **call for** cooperation and consultation in order to achieve agreement.

Recommendation 20

To express concern that Israel continues to refrain from acceding to the Non-Proliferation Treaty despite the accession of all other States in the region.

Recommendation 21

To reaffirm the resolution on the Middle East adopted at the 1995 Review and Extension Conference (as well as the Final Document of the 2000 Review Conference (part I)), which "calls upon all States in the Middle East that have not yet done so, without exception, to accede to the Treaty as soon as possible and to place their nuclear facilities under full-scope International Atomic Energy Agency safeguards".

Recommendation 22

To recall that the 1995 resolution on the Middle East was an essential element of the outcome of the 1995 Review and Extension Conference and of the basis on which the Non-Proliferation Treaty was indefinitely extended, without a vote, in 1995, and reaffirm that the resolution remains valid until its goals and objectives are achieved.

Recommendation 23

To reaffirm the 2000 Review Conference Final Document, which underscored the importance of Israel's accession to the Non-Proliferation Treaty and the placement of all its nuclear facilities under comprehensive International Atomic Energy Agency (IAEA) safeguards, in realizing the goal of universal adherence to the Non-Proliferation Treaty in the Middle East.

Safeguards and verification

Recommendation 24

To acknowledge that it is fundamental to make a distinction between legal obligations and voluntary confidence-building measures, in order to ensure that such voluntary undertakings are not turned into legal safeguard obligations.

Recommendation 25

To reaffirm that IAEA is the sole competent authority responsible for verifying and assuring compliance by States parties with their safeguards agreements undertaken in fulfilment of their Treaty obligations, with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons and other nuclear explosive devices, as well as the global focal point for nuclear technical cooperation.

Recommendation 26

To emphasize that the States parties to the Non-Proliferation Treaty should consult and cooperate in resolving their issues with regard to implementation of the Treaty-related safeguards agreements within the IAEA framework.

Recommendation 27

To confirm that the obligation under article III in verifying the peaceful nature of nuclear programmes provides credible assurances enabling States parties to engage in the transfer of nuclear equipment, material and technology for peaceful purposes in accordance with article IV. Therefore, States parties to the Treaty are called upon to refrain from imposing or maintaining any restriction or limitation on the transfer of nuclear equipment, material and technology to States parties with comprehensive safeguards agreements.

Peaceful uses of nuclear energy

Recommendation 28

To underscore that nothing in the Non-Proliferation Treaty should be interpreted to affect the inalienable right of all the parties to the Treaty to develop, research, produce and use nuclear energy for peaceful purposes; and their right to technical cooperation among themselves or international organizations, keeping in view the needs of the developing areas of the world.

Recommendation 29

To reaffirm that each country's choices and decisions in the field of peaceful uses of nuclear energy should be respected without jeopardizing its policies or international cooperation agreements or its arrangements for peaceful uses of nuclear energy and its fuel-cycle policies.

Recommendation 30

To note with concern that undue restrictions on exports to developing countries of material, equipment and technology for peaceful purposes persist.

IV. Action-oriented recommendations pertaining to the implementation of obligations under the Non-Proliferation Treaty

5. The third session of the Preparatory Committee should establish the following set of recommendations pertaining to progress in the following fields: universality, nuclear disarmament, nuclear testing, security assurances, nuclear-weapon-free zones, regional issues, particularly in the Middle East, safeguards and verification, and peaceful uses of nuclear energy.

Universality

Recommendation 31

To call on all States parties to exert all possible efforts to promote universal adherence to the Treaty and not to undertake any actions that could negatively affect prospects for the universality of the Treaty.

Nuclear disarmament

Recommendation 32

To call for full implementation by the nuclear-weapon States of their disarmament commitments under the Treaty, including those agreed by consensus at the 2000 Review Conference, to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament.

Recommendation 33

To accelerate the process of negotiation that should be undertaken, in accordance with article VI, as well as the implementation of the 13 practical steps, without further delay, in order to advance towards a nuclear-weapon-free world.

Recommendation 34

To launch the negotiation process towards a phased programme for the complete elimination of nuclear weapons within a specified time frame, including a nuclear weapons convention, without delay.

Recommendation 35

To agree on a programme of work for the Conference on Disarmament that includes the immediate commencement of negotiations on a verifiable treaty banning the production of fissile materials for nuclear weapons and other explosive devices, taking into account both nuclear disarmament and non-proliferation objectives, with a view to its conclusion within five years.

Recommendation 36

To establish, as a matter of priority, a subsidiary body on nuclear disarmament, in Main Committee I, mandated to focus on the issue of fulfilment of the obligations under article VI and further practical measures required to achieve progress in that regard.

Nuclear testing

Recommendation 37

To stress the significance of achieving the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, requiring its ratification by the remaining annex 2 States, including, in particular, by two nuclear-weapon States, thus contributing to the process of nuclear disarmament and towards the enhancement of international peace and security.

Recommendation 38

To ratify the Comprehensive Nuclear-Test-Ban Treaty by nuclear States with all expediency. Positive decisions by nuclear-weapon States would have a beneficial impact towards the ratification of the Test-Ban-Treaty. Nuclear-weapon States have a special responsibility to encourage progress on the entry into force of the Test-Ban-Treaty. These actions would encourage annex 2 States, in particular those which have not acceded to the Non-Proliferation Treaty and continue to operate unsafeguarded nuclear facilities, to sign and ratify the Test-Ban-Treaty.

Security assurances

Recommendation 39

To call for the negotiation of a universal, unconditional and legally binding instrument on security assurances to non-nuclear-weapon States against the use or threat of use of nuclear weapons. Pending the realization of the goal of total elimination of nuclear weapons, legally binding security assurances within the context of the Non-Proliferation Treaty remain essential and should be materialized without further delay.

Recommendation 40

To seek the establishment of a subsidiary body on security assurances for further work to be undertaken to consider legally binding security assurances by nuclear-weapon States to the non-nuclear-weapons States parties to the Non-Proliferation Treaty to strengthen the non-proliferation regime. Legally binding security assurances within the context of the Treaty would provide an essential benefit to the States parties and to the credibility of the Treaty regime.

Nuclear-weapon-free zones

Recommendation 41

To confirm that the establishment of nuclear-weapon-free zones created by the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Tlatelolco Treaty) and the Treaties of Rarotonga, Bangkok, Pelindaba and Semipalatinsk, as well as Mongolia's nuclear-weapon-free status, represents a positive step and an important measure towards attaining the objective of global nuclear disarmament and non-proliferation.

Recommendation 42

To reiterate the crucial need for a speedy establishment of a nuclear-weapon-free zone in the Middle East without any further delay.

Middle East

Recommendation 43

To recommend the establishment of a subsidiary body to Main Committee II of the 2010 Review Conference to consider and recommend proposals on concrete practical steps to promote the earliest implementation of the resolution on the Middle East.

Recommendation 44

To recommend the establishment of a standing committee composed of members of the Bureau of the 2010 Review Conference to follow up intersessionally on the implementation of the recommendations concerning the Middle East and to report to the 2015 Review Conference and its Preparatory Committees.

Recommendation 45

To focus the activities of the Preparatory Committee substantially on the Middle East including, in particular, the establishment of nuclear-weapon-free zone in that region in accordance with the 1995 resolution on the Middle East; and to recommend that State parties to the Treaty, in particular the three Treaty depositories and sponsors of the 1995 resolution on the Middle East, should report on steps they have taken to promote the undelayed establishment of a Middle East nuclear-weapon-free zone and the realization of the goals and objectives of the 1995 resolution on the Middle East.

Safeguards and verification

Recommendation 46

To reiterate the commitment of all States parties to the Non-Proliferation Treaty to prohibit the transfer of all nuclear-related equipment, information, material and facilities and resources or devices, and the extension of know-how or any kind of assistance in the nuclear, scientific or technological fields to Israel, as long as it remains a non-party to the Treaty and has not placed all its nuclear facilities under full-scope IAEA safeguards.

Recommendation 47

To reiterate that the IAEA's work with regard to safeguards and verification needs to be conducted in accordance with the provisions of its statute and full-scope safeguards agreements.

Recommendation 48

To request all States that have not yet done so to bring into force comprehensive safeguards agreements as soon as possible with a view to consolidating and enhancing the verification system for the nuclear non-proliferation and disarmament regime, through the universalization of comprehensive safeguards.

Recommendation 49

To request all nuclear-weapon States and all States not party to the Non-Proliferation Treaty to place all their nuclear facilities under IAEA full-scope safeguards. This should be set forth in an agreement to be negotiated and concluded with IAEA in accordance with the Non-Proliferation Treaty and the IAEA statute, for the exclusive purpose of verification of the fulfilment of the obligations of nuclear-weapon States, with a view to providing baseline data for future disarmament and preventing further diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices, as well as the prohibition of the transfer of all nuclear-related equipment, information, material and facilities and resources or devices and the extension of assistance in the nuclear scientific or technological fields to States not parties to the Treaty without exception.

Peaceful uses of nuclear energy

Recommendation 50

To stress the commitment of developed countries to facilitate and assist the legitimate development of nuclear energy by the developing countries by allowing them to participate to the fullest extent in the possible transfer of nuclear equipment, materials and scientific and technological information for peaceful purposes, with a view to achieving maximum benefits and applying pertinent sustainable development in their health, industry, agriculture and other development-related activities.

Recommendation 51

To emphasize that non-proliferation must be pursued and implemented, without exception, through the strict observance of adherence to IAEA comprehensive safeguards and to the Non-Proliferation Treaty as a condition for any cooperation in the nuclear area with States not parties to the Treaty, or for any supply arrangement with such States for the transfer of source or special fissionable material, or equipment or material specially designed or prepared for the processing, use or production of special fissionable material.

Recommendation 52

To reiterate that any undue restrictions or limitations on peaceful uses of nuclear energy that are incompatible with the provisions of the Non-Proliferation Treaty, should be removed.

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Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Progress towards nuclear disarmament by the United States of America

Working paper submitted by the United States of America

1. **Introduction**: the purpose of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons is defined in article VIII, paragraph 3 of the Treaty: to review the operation of the Treaty with a view to ensuring that the purposes of the Preamble and the provisions of the Treaty are being realized. Decision 1 of the 1995 Review and Extension Conference made permanent the practice of convening three annual Preparatory Committees before the next Review Conference in order to strengthen the review process. Both the negotiating history of the Treaty and common practice at these Preparatory Committees indicate that it is appropriate to review the progress that the United States has made towards fulfilling its commitments under the Treaty.

2. **Policy**: it is the policy of the United States that it will seek the peace and security of a world without nuclear weapons. The pursuit of this goal by the United States is a part of the fulfilment of our obligations under the Treaty, specifically those contained in article VI. Article VI calls for all parties to pursue negotiations in good faith on effective measures relating to nuclear disarmament, as well as general and complete disarmament. The United States continues to pursue negotiations and other measures seeking to achieve those goals and the promise expressed in the Treaty's Preamble: to stop the proliferation of nuclear weapons and to undertake effective measures in the direction of nuclear disarmament. The United States also is committed to enhanced transparency regarding its nuclear disarmament policies and its progress in reducing the numbers of nuclear weapons, the associated delivery systems and the quantities of related nuclear material.

3. **A new Strategic Arms Reduction Treaty (START)**: the President of the United States and the President of the Russian Federation issued a joint statement on 1 April 2009 declaring their intention to begin bilateral intergovernmental negotiations to work out a new, comprehensive and legally binding agreement on reducing and limiting strategic offensive arms to replace the START Treaty. Both sides stated their intention to conclude such an agreement before the START Treaty expires, on 5 December 2009. The new agreement will seek to record levels of

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reductions in those arms lower than those contained in the 2002 Moscow Treaty on Strategic Offensive Reductions; enhance security, predictability and stability in United States and Russian strategic offensive arms; and include effective verification measures drawn from experience gained through the implementation of the START Treaty. The negotiators of the new treaty will report on their progress to the two Presidents in July 2009.

4. **Comprehensive Nuclear-Test-Ban Treaty**: the cessation of all nuclear explosions constitutes a meaningful step in the realization of a systematic process to achieve our nuclear disarmament and non-proliferation objectives. The United States will pursue the entry into force of the Comprehensive Nuclear-Test-Ban Treaty as soon as possible. The United States has upheld a voluntary moratorium on nuclear weapons testing since September 1992 and calls on all countries to continue to refrain from nuclear testing. The Treaty has been signed by 180 countries and ratified by 148. The Treaty cannot enter into force until the 44 States specified in Annex 2 to the Treaty ratify it. Of those India, Pakistan and the Democratic People's Republic of Korea have not signed the Treaty, and six, including the United States, China, Egypt, Indonesia, the Islamic Republic of Iran and Israel, have signed but not yet ratified it. The President is fully committed to seeking United States ratification of the Treaty at an early date and will lead the diplomatic effort to persuade the other Annex 2 nations to sign the Treaty and bring it into force. The United States also continues to support international efforts to support the Treaty Organization's International Monitoring System to monitor the world for any sign of a nuclear explosion.

5. **Fissile material cut-off treaty**: the United States will seek the early commencement of negotiations on a new treaty to verifiably end the production of fissile materials intended for use in nuclear weapons. The United States will seek to remove the impediments to the negotiation of such a treaty in the Conference on Disarmament in Geneva. The United States has remained an advocate for the treaty and looks forward to working with others on proposed verification provisions. These negotiations will present a number of technical challenges, but the United States is committed to their success. In the meantime, the United States calls on all countries to cease the production of fissile materials for use in nuclear weapons immediately.

6. **Stockpile reductions**: the United States has made extraordinary progress in reducing its stockpile of nuclear weapons, strategic delivery systems, fissile materials for weapons and the associated infrastructure. Reductions are continuing on all fronts. The following paragraphs describe the progress to date.

7. **Eliminating nuclear weapons**: since 1988, the United States has dismantled more than 13,000 nuclear warheads. The United States reduced its total stockpile by one half between 2004 and 2007 and has committed to continued reductions. By 2012, the United States nuclear weapons stockpile will be less than 25 per cent of the 1991 total and at its lowest levels since the 1950s. Under the Moscow Treaty, the United States and the Russian Federation agreed to reduce the total number of their operationally deployed strategic nuclear warheads to between 1,700 and 2,200 by the end of 2012. In 1991, the United States operationally deployed approximately 10,000 warheads. As of 2002, that number had dropped to approximately 6,000, and, as at 31 December 2008, the total was 2,246 — well on course to meeting our Moscow Treaty obligations. The United States has dismantled more than 3,000 non-strategic nuclear weapons and reduced non-strategic weapons deployed in

support of the North Atlantic Treaty Organization in Europe by more than 90 per cent from cold war totals. In addition, the United States has removed all non-strategic nuclear weapons from surface ships and naval aircraft. It has withdrawn from Europe and dismantled all nuclear artillery shells, Lance missile warheads and naval nuclear depth bombs.

8. **Eliminating weapon types**: the United States continues to reduce its nuclear weapon types. The United States cancelled a number of its warhead development programmes at the end of the cold war, including the W-89 and W-91 nuclear missile warheads and the B-90 nuclear bomb. Overall, the United States has retired and eliminated all but eight nuclear weapon types from more than 100 designs that existed at the height of the cold war. Since 1992, 13 different nuclear weapon types have been retired and eliminated, including the last nuclear artillery shell design in the stockpile, the W-79, in 2003, and the W-56 warhead for the Minuteman II intercontinental ballistic missile, in June 2006.

9. **Eliminating delivery systems**: another important piece of the disarmament picture is the elimination of delivery systems. The strategic nuclear force posture planned by the United States for 2012 includes 14 ballistic missile submarines, 450 intercontinental ballistic missiles and 76 heavy bombers. In pursuit of this smaller force structure, the United States eliminated a number of strategic systems, including the MX "Peacekeeper" missiles, halted production of the B-2 "Stealth" bomber, and removed the B-1 "Lancer" as a nuclear delivery system. To date, the United States has retired more than 1,000 strategic missiles, 350 heavy bombers, 28 ballistic submarines and 450 intercontinental ballistic missile silos. The United States recently removed four modern *Ohio*-class ballistic missile submarines from strategic service, carrying a total of 96 Trident C-4 ballistic missiles, and is eliminating an entire nuclear weapon delivery system known as the Advanced Cruise Missile.

10. **Reducing the nuclear weapons infrastructure**: the United States is continuing its efforts to move to a smaller, safer, more secure and more cost-effective nuclear security enterprise. As the United States nuclear weapons stockpile has shrunk, the need for a massive weapons complex — comprising more than 70 million square feet in 1990 — has diminished significantly to less than 35 million square feet today. Plans are to continue the transformation of the weapons complex and reduce it by a further 9 million square feet by 2020. Thus, the United States National Nuclear Security Administration is consolidating its weapons-related operations and reducing the number of workers directly supporting weapons activities by 20 to 30 per cent from the 2005 baseline. One recent milestone was the complete dismantlement of the Hanford F plutonium production reactor in 2003.

11. **Ending production and removing fissile material from the stockpile**: the United States ceased uranium enrichment for weapons purposes in 1964 and plutonium production in 1988, and has no plans to resume either. At the same time, the United States has been reducing its stockpile of fissile material accumulated over the course of the cold war. The United States has declared more than 374 tons of highly enriched uranium (HEU) and 61.5 tons of plutonium excess to defence needs and removed the material from defence stocks. That is enough material, based on the International Atomic Energy Agency (IAEA) definition of significant quantities of nuclear materials, for more than 20,000 nuclear weapons. Some of that

material has been made available for IAEA safeguards, pending its disposition. In addition, some HEU down-blending has occurred under IAEA safeguards.

12. To date, the United States has down-blended nearly 110 tons of excess HEU into low-enriched uranium (LEU) and has prepared approximately 12 more tons for down-blending. In March 2008, the United States began down-blending an additional 17.4 tons of excess HEU to LEU for use as reactor fuel under the United States Reliable Fuel Supply Initiative. That effort will be complete in 2010. Further, through the United States-Russian Federation HEU purchase agreement, 500 tons of HEU from Russian military stocks are being down-blended to produce LEU for use in civilian reactors in the United States. The United States and the Russian Federation also are disposing of 34 tons of surplus weapons-grade plutonium each under the Plutonium Management and Disposition Agreement. The United States plans to convert the plutonium into mixed oxide (MOX) fuel for civilian power reactors and has begun building a new MOX fuel fabrication facility at Savannah River for this purpose.

13. **Reducing reliance on nuclear weapons**: the United States has embarked on a comprehensive review of its nuclear deterrence policy and strategy for the near term through a process known as the Nuclear Posture Review. The Department of Defense, in consultation with the Departments of State and Energy, is conducting this review to set the nuclear posture of the United States for the next 5 to 10 years. This review is the third undertaken by the United States and will be complete in December 2009. The Nuclear Posture Review will guide many of the decisions about future warhead, related material, delivery system and weapons complex reductions. The Review also will inform United States policy in the negotiations for a follow-on treaty to replace the START Treaty with the Russian Federation. The first Review, completed in 1994, affirmed the nuclear warhead reductions already under way, reduced the scope of nuclear weapon deployments and mandated improvements in nuclear weapons security. The second Review, in 2002, announced the transition from the cold war triad of land, air and sea-based weapons to a new triad comprising nuclear and conventional offences, defences such as missile defence, and a responsive nuclear weapons manufacturing and surety infrastructure. The new Nuclear Posture Review will guide the United States towards the Administration's stated goals of reducing the role of nuclear weapons in the national security strategy of the United States while maintaining a safe, secure and reliable nuclear capability to deter adversaries and assure friends and allies.

14. **Conclusion**: President Barack Obama pledged in his 5 April speech in Prague that "the United States will take concrete steps toward a world without nuclear weapons". He said that "this goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change". The United States continues to make great strides towards fulfilling the President's pledge.

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Contributions of the Latin American and Caribbean States parties to the Treaty of Tlatelolco

Working paper submitted by the States parties to the Treaty of Tlatelolco

1. The States parties and signatories to the Treaties of Tlatelolco (1967), Rarotonga (1985), Bangkok (1995), Pelindaba (1996) and on a Nuclear-Weapon-Free Zone in Central Asia (2009) — which have established nuclear-weapon-free zones — and Mongolia are convinced that the mere existence of nuclear weapons constitutes a threat to the survival of mankind and that their use would have catastrophic consequences for life on Earth. It is, therefore, fundamental to achieve the main goal of nuclear disarmament leading to the total elimination and prohibition of nuclear weapons.

2. We reaffirm the need to advance towards the priority goal of nuclear disarmament and the elimination and prohibition of nuclear weapons. In this context, we reiterate our conviction that the achievement of this goal requires firm political will on the part of all States, particularly those possessing nuclear weapons.

3. We reaffirm that the use or threat of use of nuclear weapons is a violation of international law and of the Charter of the United Nations and a crime against humanity, as stated in many General Assembly resolutions.

4. While noting some positive political signals coming from nuclear-weapon States of their renewed commitment to bilateral and multilateral nuclear disarmament, we expect them to be turned into concrete actions in the near future.

5. We recognize multilateralism as the core principle of disarmament negotiations and nuclear non-proliferation efforts aimed at maintaining, strengthening and enlarging the scope of universal nuclear disarmament norms, as well as the complementary nature of irreversible and verifiable unilateral and bilateral measures in this area.

6. We acknowledge that there have been some unilateral and bilateral cut-offs in nuclear arsenals, however, the lack of progress towards the total elimination of nuclear weapons remains a matter of serious concern. The fact that there are

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thousands of such weapons unaccounted for owing to the lack of transparency in nuclear weapon programmes is equally worrisome.

7. We stress that all nuclear disarmament initiatives should be irreversible, transparent and verifiable.

8. The establishment of internationally recognized nuclear-weapon-free zones is based on agreements freely undertaken by interested States. Those agreements strengthen international and regional peace and security as well as the non-proliferation regime and contribute to achieving nuclear disarmament. The establishment of such zones and full compliance with those agreements ensure that considerable parts of the world become free of nuclear weapons. Therefore, respect by nuclear-weapon States for the denuclearized status of those zones constitutes an important measure towards nuclear disarmament and non-proliferation.

9. We reiterate the validity of the declaration adopted at the first Conference of States Parties and Signatories to the Treaties that Establish Nuclear-Weapon-Free Zones, held in Mexico City in April 2005, as a contribution to the process of disarmament and non-proliferation. We reaffirm our commitment to the full implementation of the declaration.

10. We urge the nuclear-weapon States and any other States mentioned in the relevant protocols to the treaties that established nuclear-weapon-free zones that have neither signed nor ratified such protocols to do so as a matter of priority.

11. We also urge the nuclear-weapon States that, having signed or ratified any of the pertinent protocols to treaties that established nuclear-weapon-free zones with reservations and unilateral interpretative declarations that affect the process of denuclearization of any zone, to modify or withdraw such reservations and/or declarations.

12. We welcome the establishment of the nuclear-weapon-free zones created by the Treaties of Tlatelolco, Rarotonga, Bangkok and Pelindaba as positive steps towards achieving the objective of global nuclear disarmament. We also welcome the efforts undertaken to conclude the process of ratification of the Pelindaba Treaty, signed on 11 April 1996, through which a nuclear-weapon-free zone was established in Africa. We urge States in the region to ratify it, paving the way for its entry into force.

13. We welcome the entry into force of the Treaty on a Nuclear-Weapon-Free Zone in Central Asia on 21 March 2009, and urge all nuclear-weapon States to sign and ratify the Protocol thereto in order to enable its full implementation.

14. We will continue to promote the establishment and consolidation of new nuclear-weapon-free zones all around the world as a means to achieve the goal of total elimination of nuclear weapons. We therefore encourage all States to negotiate agreements that lead to the establishment of new nuclear-weapon-free zones for example, in the Middle East and South Asia.

15. We are fully convinced that the Treaty on the Non-Proliferation of Nuclear Weapons is a fundamental instrument to foster nuclear disarmament and to enhance the non-proliferation regime. Hence, it should be a priority of the international community to reach its universalization. We therefore call upon the entire international community to make all necessary efforts to meet this objective. We

also urge those States that are not parties to the Treaty to adhere to it unconditionally as a matter of priority as non-nuclear-weapon States.

16. We express our deepest concern over the lack of progress in the implementation of the nuclear disarmament commitments agreed to during the 2000 Review Conference.

17. We urge the nuclear-weapon States to fulfil their obligations under article VI of the Treaty by expediting the implementation of the outcomes of the 1995 and 2000 Review Conferences, which call for the total elimination of nuclear weapons by means of systematic and progressive efforts towards nuclear disarmament, in particular, the 13 steps agreed to in the outcome document of the 2000 Review Conference (NPT/CONF.2000/28 (Parts I and II) and Corr.1), including the unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States are committed.

18. The 2010 Review Conference should establish a subsidiary body on nuclear disarmament to address the issue of the implementation of obligations under article VI of the Treaty.

19. We believe that a phased programme to gradually eliminate all nuclear weapons should be established within a specific time frame. The negotiation of such a programme should take place at the Conference on Disarmament. For this purpose, we recognize the necessity of establishing in the Conference on Disarmament an appropriate subsidiary body with a mandate to negotiate nuclear disarmament. The Conference on Disarmament is urged to agree on a programme of work that includes the immediate establishment of such a body.

20. We reiterate our position with respect to the total ban on all nuclear tests and emphasize the need for reaching universal adherence to the Comprehensive Nuclear-Test-Ban Treaty, particularly by all nuclear-weapon States, to contribute to the process of nuclear disarmament. We highlight the importance of implementing a moratorium on nuclear weapon tests or any other kind of nuclear explosions until the entry into force of that Treaty. We reiterate that to fully meet the goals of the Treaty, it is essential that all signatories, in particular the nuclear-weapon States, maintain a standing commitment to total and unconditional disarmament. We call upon States that have not signed or ratified this instrument to do so as soon as possible.

21. The total elimination of nuclear weapons is the only absolute guarantee against the use or the threat of use of nuclear weapons. As a step towards a world free of nuclear weapons, we urge the nuclear-weapon States to provide the non-nuclear-weapon States with effective security assurances that the former will not use or threaten to use nuclear weapons against the latter. In addition to respecting the commitments undertaken in the context of Security Council resolution 984 (1995) and the legally binding negative security assurances contained in the pertinent protocols to the nuclear-weapon-free zone treaties, we urge the nuclear-weapon States to take all necessary measures to negotiate and conclude a treaty on universal, unconditional and legally binding security assurances to the non-nuclear-weapon States. Until such a treaty comes into existence, we also urge nuclear-weapon States to fully respect the commitments already made in relation to negative security assurances. This issue should be addressed as a matter of priority at the 2010

Review Conference. We highlight the need for the establishment of a subsidiary body of the 2010 Review Conference on negative security assurances.

22. We reaffirm the inalienable right of all States to develop, research, produce and use nuclear energy for peaceful purposes without any kind of discrimination. Hence, we underscore the role the International Atomic Energy Agency plays in verifying that nuclear energy is being used only for peaceful uses.

23. We are convinced that any restriction or limitation on the use of nuclear energy for peaceful purposes should be consistent with the provisions of the Treaty on the Non-Proliferation of Nuclear Weapons and with the Charter of the United Nations. We underscore the importance of non-proliferation agreements being universal, transparent and non-discriminatory. In this context, we recognize that multilateralism is the cornerstone of disarmament negotiations and non-proliferation efforts.

24. Furthermore, we are convinced of the benefit that the use of the resources devoted to nuclear-weapon programmes could have for humanity if they were utilized for supporting social and economic development.

25. We recognize the importance of multilateralism and in particular the notable role played by the United Nations in the area of nuclear disarmament and nuclear non-proliferation, and we reiterate our commitment to adopting measures to strengthen that role.

26. We emphasize the important role of the nuclear-weapon-free zones as constructive bridges in disarmament negotiations and dialogue. We will continue to pursue international efforts aiming at a world free of nuclear weapons. In this regard, we intend to foster cooperation among the nuclear-weapon-free zones to fully implement the objectives of the treaties. We express our interest in promoting initiatives aimed at strengthening national capacity and education in order to warn of the dangers posed by nuclear weapons and to promote their total elimination.

27. We renew our commitments towards strengthening cooperation and consultation mechanisms among the different nuclear-weapon-free zones. To accomplish this purpose, we will continue to promote the exchange of information among the zones and will work to coordinate our positions, as appropriate, in international forums, conferences and organizations.

28. In order to continue contributing to nuclear disarmament efforts, we, the States parties and signatories to the Treaties of Tlatelolco, Rarotonga, Bangkok, Pelindaba and on a Nuclear-Weapon-Free Zone in Central Asia, and Mongolia, decide to convene the second meeting of the States parties and signatories of the nuclear-weapon-free zone treaties in 2010, in New York, prior to the 2010 Review Conference. We express our interest in making an effective contribution to the work of the third Preparatory Committee for the 2010 Review Conference, held in New York from 4 to 15 May 2009.

Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Working paper submitted by Belgium, Lithuania, the Netherlands, Norway, Poland, Spain and Turkey for consideration at the third session of the Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

Introduction[1]

1. We are determined to uphold the viability of the Treaty on the Non-Proliferation of Nuclear Weapons and its central role in the international non-proliferation regime, the pursuit of nuclear disarmament with the objective of achieving a world free of nuclear weapons and the peaceful use of the atom.

2. We are convinced that the continued strength and vitality of the Treaty stems from the balanced and comprehensive approach embodied in it. We are resolved to make significant progress in all areas of the Treaty by ensuring the full application of the international nuclear non-proliferation standards to meet the current threats and challenges, by taking practical steps towards the total elimination of nuclear weapons and by enhancing international cooperation on the peaceful use of nuclear energy for the benefit of mankind. The principles of responsibility, accountability, verification and transparency are crucial.

3. We stress the need of making full and constructive use of the Treaty review process, which offers a regular opportunity to check the impact of changing circumstances on the functioning of the Treaty.

4. We acknowledge that the effects of globalization on political, security, economic, energy and environmental affairs should be taken into account in the Treaty review process. We are conscious of the many opportunities offered by technological advances in the nuclear field and by increased access to and demand for nuclear energy and other civilian nuclear applications. These developments

[1] The present working paper complements proposals contained in the working paper (NPT/CONF.2005/WP.35) submitted by Belgium, Lithuania, the Netherlands, Norway, Spain, Poland and Turkey at the 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons.

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should be matched by innovative and cooperative measures to ensure the continued relevance and respect of the international non-proliferation regime.

5. We recognize that full and universal implementation of the Treaty offers a unique contribution to international peace and security.

6. We call on those States that remain outside of the Treaty to adhere to it as non-nuclear-weapon States.

7. We are also convinced that international peace and security will be negatively affected if a State party were to withdraw from the Treaty and we call on all States parties to the Treaty to remain indefinitely committed to it.

1. Nuclear disarmament

8. Nuclear disarmament, non-proliferation and peaceful use are all essential to the Treaty regime and are complementary to each other. As such, they require equal treatment. Irreversible progress on disarmament will subsequently reinforce the two other pillars of the Treaty. Nuclear disarmament requires an incremental but sustained approach in which all treaty-based nuclear arms control and disarmament agreements play distinctive roles. Treaty-based nuclear arms control is indispensable for the active promotion of collective security and cooperation in the pursuit of global disarmament. The unequivocal undertaking by all nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI of the Treaty, is one of the major achievements of the Treaty process. This undertaking must now be operationalized, building also on article VI and the 13 practical steps for nuclear disarmament agreed upon in 2000. The diminishing role attributed to nuclear weapons in security policies should be maintained and further pursued, minimizing the risk that these weapons will ever be used. Further diminishing the role of nuclear weapons will pave the way for and facilitate their ultimate elimination:

(a) We welcome the steps nuclear-weapon States have taken so far to reduce their nuclear arsenals. While recalling the principles of irreversibility, verifiability and transparency, we welcome and encourage the efforts to replace START with a new legally binding instrument;

(b) We also call for the inclusion of all non-strategic nuclear weapons by those States which possess them in their general arms control and disarmament processes, with a view to their reduction and elimination. We encourage the further implementation of existing commitments in this area;

(c) We encourage States possessing nuclear weapons to publish their aggregate holdings of nuclear weapons, both active and in reserve;

(d) We also call on all nuclear-weapon States to pursue a policy that is fully compatible with the objective of the total elimination of nuclear weapons as foreseen under the Treaty;

(e) We maintain a long-standing commitment to arms control, disarmament and non-proliferation as an integral part of our overall security policy, firmly embedded in the broader political context in which we seek to enhance stability and security by lowering arms levels and increasing military transparency and mutual confidence;

(f) Recognizing that progress has been made with regard to the commitments of the 2000 Review Conference on concrete measures to reduce the operational status of nuclear weapons systems, we call for further progress in this area;

(g) We support initiatives aimed at encouraging nuclear-weapon States to place nuclear material no longer required for military purposes under the International Atomic Energy Agency (IAEA) verification regime.

2. Nuclear non-proliferation

9. Nuclear non-proliferation is essential for maintaining peace and security. Non-proliferation is a precondition for achieving the goal of a world free of nuclear weapons. Given continued loopholes in the international non-proliferation regime, and their security risks for the international community as a whole, it is imperative to strengthen the non-proliferation dimension of the Treaty:

(a) We recognize that IAEA is the sole multilateral body in administering international safeguards to ensure that nuclear technology for peaceful purposes is not diverted to nuclear weapons programmes;

(b) We consider the IAEA comprehensive safeguards agreements and the Additional Protocol to constitute the current verification standard, and call upon all States parties which have not done so to ratify and implement these vital instruments without delay;

(c) The entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) will form an integral part of a strengthened and more credible non-proliferation regime. We urge all States which have not yet done so to swiftly sign and ratify CTBT. A special responsibility in this endeavour lies with the annex II States.

(d) Commencing without delay negotiations on an internationally and effectively verifiable fissile material cut-off treaty, and reaching agreement on such a treaty, will offer a vital contribution to the global non-proliferation architecture. Pending such agreement, we call for an immediate moratorium on the production of fissile material for nuclear weapons;

(e) Security Council resolution 1540 (2004) calls on all States members of the United Nations to establish and enforce effective domestic legislation to prevent proliferation of material and technology for manufacture of weapons of mass destruction and their means of delivery. We firmly urge all States to implement resolution 1540 (2004) and the subsequent resolutions of the Security Council in good faith;

(f) Export controls play a crucial role in the implementation of the non-proliferation obligations of States parties. We welcome increased transparency between export control mechanisms and their contribution to international export control cooperation;

(g) Universal approaches can be usefully complemented by cooperative efforts and initiatives, such as the Proliferation Security Initiative, the Global Partnership against the Spread of Weapons of Mass Destruction and the Global Initiative to Combat Nuclear Terrorism, as well as regional lines for action, towards the implementation of non-proliferation obligations.

3. Peaceful uses of nuclear energy

10. In accordance with article IV of the Treaty and article II of the statute of IAEA, we reaffirm our support for the inalienable right of all parties to the Treaty to develop research, produce and use nuclear energy for peaceful purposes, without discrimination and in conformity with articles I, II and III of the Treaty.

11. A significant number of States have expressed an interest in obtaining the benefits of nuclear power, while several more are expanding their existing nuclear programmes. Additional peaceful applications of nuclear energy in the areas of health, agriculture, environment protection and industry are also being used and discovered. In the light of this growing interest in the peaceful applications of nuclear energy, we are convinced that States parties must also address serious proliferation and non-compliance challenges. Thus, we reconfirm the value of the Treaty and the need to preserve the balance between the pillars of the Treaty, and also between its rights and obligations:

(a) We recognize the importance for the international non-proliferation regime of promoting a global nuclear, radiation and waste safety culture and the need for measures to improve nuclear security. We believe that IAEA should play an important role in this field through its various programmes and initiatives;

(b) We underline and support the role of IAEA in assisting developing countries in the peaceful use of nuclear energy and applications in the areas of health, agriculture, environment protection and industry through the development of effective programmes aimed at improving their scientific, technological and regulatory capabilities. IAEA technical cooperation programmes also play a relevant role in assuring the peaceful use of nuclear energy and reducing the associated proliferation risks;

(c) We believe that, in order to provide credible assurances about the peaceful nature of national programmes, the peaceful use of nuclear energy should be linked with national implementation of the IAEA Additional Protocol, based on the model text of INFCIRC/540 (Corrected), which is a fundamental component and instrument of the international regime against nuclear proliferation;

(d) We believe that the development of multilateral nuclear fuel supply mechanisms can have a particular relevance for the global nuclear non-proliferation regime. Setting up an international nuclear fuel bank under the control of IAEA will constitute an initial important step ensuring that nuclear fuel cycles will be exclusively used for peaceful purposes. The impartiality of IAEA will be a key factor in giving credibility to, and raising the profile of, any assurance provided by the nuclear fuel bank.

4. Negative security assurances and nuclear-weapon-free zones

12. Legally binding negative security assurances enhance international peace and security and contribute to consolidating the non-proliferation regime. Regional nuclear-weapon-free zones established on the basis of 1999 guidelines of the United Nations Disarmament Commission provide an important tool to advance the implementation of the Treaty:

• **Negative security assurances**

We are convinced that legally binding security assurances provided by the five nuclear-weapon States to the non-nuclear-weapon States would strengthen the nuclear non-proliferation regime and we advocate the commencement of negotiations to that end. Pending legally binding assurances, we call upon the nuclear-weapon States to abide by their unilateral security assurances and to reaffirm existing security assurances noted by the Security Council in its resolution 984 (1995).

• **Nuclear-weapon-free zones**

In the context of effective international arrangements to assure non-nuclear-weapon States against the use or threat of use of nuclear weapons, we attach great importance to the development of internationally recognized nuclear-weapon-free zones, as elaborated in the guidelines adopted by the Disarmament Commission at its substantive session in 1999. Implementing nuclear-weapon-free zones is a way of enhancing negative security assurances on a regional basis, and contributes to the strengthening of the Treaty as it facilitates the process of the total elimination of nuclear weapons. We are committed to the establishment of a zone free of nuclear weapons and other weapons of mass destruction and their means of delivery in the Middle East.

5. Nuclear terrorism and illicit trafficking in nuclear material

13. Nuclear terrorism and illicit trafficking in nuclear material represent considerable security threats that need to be adequately addressed also at the international level. We recall that a key objective of Security Council resolution 1540 (2004) is to prevent non-State actors from acquiring nuclear weapons as well as relevant nuclear materials and technologies. We call for a comprehensive and mutually reinforcing approach, using all available means:

(a) International Convention for the Suppression of Acts of Nuclear Terrorism;

(b) IAEA, including the nuclear security programme, the amended Convention on the Physical Protection of Nuclear Material and the Code of Conduct on the Safety and Security of Radioactive Sources;

(c) Global Initiative to Combat Nuclear Terrorism;

(d) Proliferation Security Initiative;

(e) Voluntary efforts by States to convert their civilian nuclear research reactors from using highly enriched uranium (HEU) to low enriched uranium (LEU).

6. Strengthening the consultative mechanism for the Treaty on the Non-Proliferation of Nuclear Weapons

14. The Treaty on the Non-Proliferation of Nuclear Weapons is a cornerstone of the international nuclear non-proliferation and disarmament regime. Mindful of the 1995 decision on strengthening the Treaty review process, the Treaty warrants a substantial and continuous follow-up:

(a) We welcome the further development of a consultative mechanism for the Treaty, including the consideration of options for an institutional framework, which would provide States parties with an ability to react adequately and in a timely manner to developments and challenges;

(b) While fully recognizing the primary responsibility of the Security Council for the maintenance of international peace and security, States parties should urgently consult upon receipt of a notification by a State party of its intention to withdraw from the Treaty;

(c) We call on all States parties to actively use the Treaty meetings, including through regular reporting, and to contribute to this process by increasing transparency and accountability;

(d) We welcome the contribution of civil society in promoting the principles and objectives of the Treaty. The 2010 Review Conference should acknowledge this indispensable contribution and look for more effective interaction.

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Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Multilateralization of the nuclear fuel cycle: increasing transparency and sustainable security

Working paper submitted by Austria

This paper elaborates on a food-for-thought paper submitted by Austria to the Preparatory Committee at its first session (NPT/CONF.2010/PC.I/7).

I. Introduction

1. Article IV of the Treaty on the Non-Proliferation of Nuclear Weapons establishes the "inalienable right" of all the parties to the Treaty to "... use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty". In exercise of this right, several States have opted to include nuclear power in their energy mix. After decades of decline, experts predict that overall global nuclear power capacity might increase in the coming years.

2. Because of its inherent dangers, nuclear technology continues to represent the potentially most destructive threat to global security. Every expansion in the use of nuclear power leads to the spread of fuel cycle services, thus increasing the risk of misuse for non-peaceful purposes, whether by States or non-State actors. The anticipated rise in demand for fuel cycle services, as well as the associated risks of weapon proliferation, nuclear terrorism, illicit trafficking, and accidents involving radioactive materials, requires new frameworks for reducing the threat of misuse — or careless use — of nuclear energy.

3. As we strive for the complete elimination of nuclear weapons, and as this goal begins to see reflection in the official policies of nuclear-weapon States, the need for a long-term vision to address non-proliferation concerns gains increasing urgency. Given the mutually reinforcing nature of disarmament and non-proliferation efforts, it is vital to ensure that any progress towards disarmament of nuclear weapons is not hindered in any way by concerns over non-proliferation.

4. Legitimate concerns of States which rely on nuclear energy regarding the supply of fuel for their reactors need to be addressed, as well as concerns regarding misuse and proliferation. In today's world, international challenges can be solved

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only by close cooperation and inclusive, transparent and verifiable multilateral systems. The crisis of confidence and mutual mistrust on nuclear issues requires a bold new approach to the nuclear fuel cycle.

5. Several proposals have been made. Building on work done in the past, the International Atomic Energy Agency (IAEA) and its Director General, Mohamed ElBaradei, have been leading the debate and providing the key forum for advancing these proposals.[1] Austria contributed to this debate by presenting a short food-for-thought paper at the first session of the Preparatory Committee in 2007 (NPT/CONF.2010/PC.I/7; circulated at IAEA as INFCIRC/706). The current paper develops some of the ideas further.

II. General outline

6. Multilateralization of the nuclear fuel cycle has the following principal objectives:

- To increase transparency on global nuclear fuel cycle activity.
- To ensure security of supply of nuclear fuel and fuel services for peaceful purposes for those States which have chosen to include nuclear power in their energy mix.
- To increase security for all by addressing various non-proliferation concerns.
- To create conditions which can reinforce efforts towards the complete elimination of nuclear weapons.

7. Austria believes that the interests of all States would be served by the introduction of maximum transparency through a new multilateral framework of supervision of all stages of the nuclear fuel cycle "from the cradle to the grave". Such a framework would better reflect the needs and realities of our global community in the twenty-first century.

8. Concerns have been expressed that some proposals for multilateral approaches to the nuclear fuel cycle might undermine or curtail developing countries' right to the use of nuclear energy for peaceful purposes. It is important to emphasize that the approach outlined here is not an attempt to divide the nuclear community into suppliers and recipients. On the contrary, the proposed framework would ultimately lead to a more comprehensive implementation of article IV, where the benefits of advanced nuclear technologies would be made available to all States that seek them on a fair and equal basis. While the primary motivation for moving towards such a non-discriminatory approach stems from non-proliferation considerations, it is evident that multilateralization of the nuclear fuel cycle could also have considerable advantages in terms of safety, security and cost.

9. The establishment of a multilateral fuel cycle arrangement is likely to be implemented in phases, through various complementary instruments and by different actors. This should be done as part of an agreed framework. Austria's

[1] See in particular the IAEA report entitled *Possible New Framework for the Utilization of Nuclear Energy: Options for Assurance of Supply of Nuclear Fuel* (June 2007), and the Director General's introductory statement to the IAEA Board of Governors, 5 March 2009.

proposed framework seeks to take account of a number of existing proposals, some of which are already at an advanced stage of implementation.

III. Proposal for multilateralization of the nuclear fuel cycle

10. Two parallel tracks would be pursued simultaneously, the first focused on building transparency and mutual confidence, and, crucially, allowing IAEA to build a fully comprehensive picture of each State's nuclear capabilities and activities, and the second setting out steps towards multilateralization of the nuclear fuel cycle.

Track 1: "Cradle to grave" information system for transparency and confidence-building

A. Goal

11. An IAEA "cradle to grave" information system would greatly facilitate the work of the Agency, ensuring that it commands a fully comprehensive picture of the global nuclear industry, and each State's capabilities, activities and transfers, at each stage of the fuel cycle. It would also increase significantly the quantity and quality of information available to States. All States would benefit equally from this system, which would provide greater clarity as to the nature of each State's nuclear activities and thus enhance overall confidence regarding nuclear issues.

B. How and when

12. Much of the information which would form part of the "cradle to grave" information system is already gathered by IAEA for verification and other purposes. This would be drawn together and supplemented, in order to form a complete profile on each State, regardless of its level of nuclear activity. IAEA should be requested to propose a detailed conceptual framework for the information system as soon as possible, taking account of confidentiality requirements.

C. Core elements

13. The information system would comprehensively capture data on all States, through periodic and real-time submission of data.

14. For States with nuclear power programmes or research reactors, the information system would comprehensively capture data on all stages of the nuclear fuel cycle, from the time that nuclear material is mined or imported — in whatever state of processing — to the time that spent fuel is finally disposed of, put into long-term storage or rendered irrecoverable. Nuclear-weapon States would also be required to share initial information on their strategic fuel supplies and strategic facilities, pending agreement on a fissile material cut-off treaty, which is expected to include provisions for full transparency and verification.

15. For States without nuclear power programmes, the system would capture information on any source or special fissionable material held for non-power applications. In addition, some States with ore deposits relevant to nuclear programmes may not have such programmes, but would nonetheless be covered by the system.

16. The type of information which each State would be required to provide includes:

- Periodic information on all national capabilities and operational capacities for each stage of the nuclear fuel cycle, including mining of source material, processing, storage and transport, conversion, enrichment, fuel fabrication, fuel assembly, reactor operation, reprocessing, and disposal and storage of spent fuel and other radioactive waste.
- Real-time information on all national and transnational transactions involving source or special fissionable material and nuclear fuel services.
- Periodic or real-time information, as appropriate, on all activities and transactions relating to non-power applications of nuclear energy.

17. Together with the information currently gathered by IAEA as part of its verification work and pursuant to other mandates and programmes, the additional information obtained through the "cradle to grave" information system would provide IAEA and States with a complete global picture. IAEA would publish a periodic assessment of the global nuclear fuel and fuel services market based on information provided. The resulting transparency — facilitated by the gradual multilateralization envisaged under track 2 — should constitute a significant confidence-building measure.

Track 2: Multilateralization of the nuclear fuel cycle

A. Goal

18. Much of the current mistrust in international affairs has its origin in national nuclear programmes. History has provided ample evidence that cooperative endeavours among States can reduce mistrust by introducing checks and balances. As regards the nuclear fuel cycle, the best way of providing sustainable security for all is by ensuring that States work together in all stages of the cycle. Jointly operated facilities also have the advantage that customer States are not dependent on the national policies of individual provider States. Multilateral facilities can thus provide supply assurances, without calling into question existing article IV rights, while at the same time addressing non-proliferation concerns.

B. How and when

19. The groundwork for multilateralization would begin with the establishment of a nuclear fuel reserve, as a confidence-building measure. At the same time, IAEA would gradually assume the functions of a virtual broker for all fuel cycle-related transactions. Existing facilities would eventually be transformed into new forms of multilateral or regional ownership and new facilities would be established as multilateral facilities from the outset. Finally, a decision would be taken that the rights enshrined in article IV, insofar as they apply to the nuclear fuel cycle, would be exercised exclusively through multilateral endeavours.

C. Core elements

1. Nuclear fuel reserve under IAEA control

20. To immediately address concerns expressed by some States about the potential for disruption of supply of nuclear fuel for political reasons, a nuclear fuel reserve

or bank under IAEA control would be established, as proposed by the Nuclear Threat Initiative and others. The creation of a last-resort reserve of low enriched uranium for States whose supply has been interrupted — and that are in good standing with IAEA — can provide important reassurances.

21. IAEA should be requested to provide a detailed blueprint for the operation of the fuel reserve as soon as possible. Factors to be considered include the following:

- The conditions for accessing fuel from the reserve
- Physical location of the low enriched uranium stocks
- A procedure for determining the price
- Questions related to safety, security and safeguards.

22. The conditions for accessing the low enriched uranium reserve should convince States of the benefits of reliance on multilaterally sourced fuel, rather than domestic development of the full nuclear fuel cycle, without disturbing functional markets. The involvement of IAEA should reassure potential customer States that any decision to supply from the nuclear fuel bank would be taken on a non-discriminatory and non-political basis. Criteria would be established in advance and applied objectively and consistently.

2. *IAEA as virtual broker*

23. In parallel to the decision to establish the "cradle to grave" information system, referred to under track 1, IAEA would be granted the mandate to act as a mandatory virtual broker in all transactions related to the nuclear fuel cycle.

24. The virtual broker arrangements would apply to all transactions involving source or fissionable materials — regardless of the stage of processing — as well as fuel cycle services such as uranium conversion, uranium enrichment, reprocessing, and disposal and storage of spent fuel and other radioactive waste.

25. As a virtual broker, IAEA would not take physical possession or legal title of the nuclear materials or services in question. However, the Agency would be in an optimal position to help to provide assurances of supply to customer States. If a customer were unable to obtain fuel or services from a particular provider, IAEA would be in a position to help to identify alternative suppliers, using information already at its disposal — which would include information on the capacities of each country's facilities at each stage of the fuel cycle — and through pre-agreed standby arrangements. As a last resort, the nuclear fuel reserve would also be available.

3. *Multilateralization of existing nuclear fuel cycle facilities*

26. With regard to existing national facilities, incentives should be provided to encourage broader involvement by interested States, for instance by permitting them to become shareholders, influence strategic decisions at the facilities in question, and share profits and responsibilities. Shareholdings could provide important incentives to States for which guaranteed supply is a primary consideration.

27. Under this model, operation of the plant would continue to lie with the States involved, but safeguards would in all cases be applied by IAEA, to standards at least as high as those for facilities in States with a Comprehensive Safeguards Agreement and an Additional Protocol in force. Additional safeguards measures should also be

considered in recognition of new types of multilateral ownership. IAEA would have a role to play in certifying regional facilities, in order to guarantee high standards of safety and security.

28. In order to avoid any potential conflict with article IV of the Treaty, participation in a multilateral or regional fuel cycle facility would not require a State formally to forgo the right to development of national facilities, but it is expected that the incentive to develop national facilities would be greatly diminished, particularly as confidence grows over time in the ability of a regional facility to satisfy all fuel and fuel service demands. At the same time, the involvement of multiple partners would act as a barrier to "break out" from civil nuclear energy programmes to nuclear weapon programmes.

29. To ensure the smooth operation of regional facilities and reflect new ownership structures, appropriate amendments would be made to national export control legislation, and to the guidelines of relevant export control regimes.

30. Multilateral or regional facilities, such as the International Uranium Enrichment Centre being established by the Russian Federation on the site of the Angarsk Electrolysis Chemicals Complex, are already envisaged. The proposal by Germany for a Multilateral Enrichment Sanctuary Project also provides a model which can serve this purpose.

4. *All new fuel cycle facilities under multilateral control*

31. Newly built fuel cycle facilities would come under compulsory multilateral control from the outset. Agreements with IAEA would ensure the highest verification, safety and security measures.

32. New multilateral facilities should offer a range of nuclear fuel services, both at the front and back ends of the nuclear fuel cycle. Back-end services might be of particular interest to States without the means to dispose of or store waste. As technologies related to reprocessing of spent fuel improve in the coming years, it is expected that new methods for storage and disposal of spent fuel and radioactive waste will be found.

5. *Full multilateralization of all facilities*

33. At the end of the process, all fuel cycle facilities worldwide would be under multilateral control. IAEA verification would become more efficient and less costly, as a number of facilities could be expected to shut down, leading to a more limited number of larger facilities, just as many as global demand requires.

34. A legally binding international instrument would limit the production or reprocessing of all nuclear material for civilian nuclear programmes to facilities under multilateral control. A separate agreement on a verifiable fissile material cut-off treaty would ensure that production of nuclear material for strategic nuclear programmes would also be halted at this stage, if not earlier, allowing strategic facilities to be converted to civilian use under multilateral control, or closed down. These steps would ensure a level playing field for all.

35. Assurances of supply of nuclear fuel would continue to be provided to States in good standing with IAEA, and, in view of the multilateral nature of control, an IAEA fuel reserve would no longer be necessary.

36. Full multilateralization would significantly reduce the threat of proliferation of nuclear weapons through a "break-out" from civil nuclear energy programmes, without dividing the world into "good" and "bad" States, or "haves" and "have-nots". Export control regimes, such as the Nuclear Suppliers Group, would no longer prove necessary once full multilateralization had been achieved.

37. At the back end of the nuclear fuel cycle, multilateral storage facilities would reduce proliferation risks by pooling sensitive nuclear material in a limited number of facilities worldwide, under IAEA safeguards. Multilateralization also has the potential to allow safer and more environmentally sound storage and disposal of spent fuel and radioactive waste, carried out to the highest international standards.

IV. The way forward

38. The debate on multilateral approaches to the nuclear fuel cycle will be enriched in the Treaty review process and at IAEA. Special efforts are required to ensure that States not parties to the Treaty are fully involved in the elaboration of any new framework, and consideration should be given to the convening, at the appropriate time, of a United Nations conference to adopt a framework towards multilateralization of the nuclear fuel cycle.

39. Austria recognizes that the framework presented in this paper is ambitious. But if the upsurge in nuclear power capacity follows forecast trends, then it is important to act now. The broad concept outlined in this submission is not untested. More than 50 years ago, the founding members of the European Union decided to place potentially destabilizing assets — coal and steel — under the supervision of a new supranational and democratic institution, the European Coal and Steel Community, thus ushering in a new era of enduring peace between the participating countries. This model can be applied on a global scale to nuclear technologies and make a significant contribution to peace and security for all.

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A treaty banning the production of fissile material for nuclear weapons or other nuclear-explosive devices as the next logical multilateral instrument to be negotiated for the cessation of the nuclear arms race and nuclear disarmament in accordance with article VI of the Treaty on the Non-Proliferation of Nuclear Weapons

Working paper submitted by the European Union

The European Union (EU) recalls that both decision no. 2 of the 1995 Extension and Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Final Document of the 2000 NPT Review Conference call for the immediate commencement in the Conference on Disarmament of negotiations on a Treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices (FMCT) as one of the important measures to implement article VI of the NPT.

The EU attaches a clear priority to the negotiation, without preconditions, in the Conference on Disarmament, on an FMCT, including verification provisions as a means to strengthen disarmament and non-proliferation. It is a priority that is ripe for negotiation, as demonstrated, inter alia, by the encouraging and interactive debates in the Conference on Disarmament on the issue during the past three years. The EU welcomes and is encouraged by the recent joint statement made by Presidents Obama and Medvedev in support of "international negotiations for a verifiable treaty to end the production of fissile materials for nuclear weapons".

The negotiations on an FMCT are overdue. The EU is convinced that an FMCT, by banning the production of fissile material for nuclear weapons or other nuclear explosive devices, will constitute a significant achievement in nuclear disarmament efforts, in accordance with article VI of the NPT. Logically, an FMCT constitutes the next multilateral instrument to be negotiated in the nuclear disarmament field. It would thus complement the NPT and the Comprehensive Nuclear-Test-Ban Treaty (CTBT). It would certainly strengthen nuclear disarmament, as it would contribute to making the trend of nuclear weapons reductions irreversible. Without the availability of additional fissile material for nuclear weapons or other nuclear explosive devices it would be impossible to

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increase existing stocks of fissile material for such purposes. It would be an essential and concrete contribution to completing nuclear disarmament, in accordance with article VI of the NPT, by creating some of the elements necessary for the fulfilment of the final objective enshrined in article VI of the Treaty.

The EU is convinced that the strengthening of the NPT regime is achievable through a balanced and gradual approach to its three mutually reinforcing pillars: non-proliferation, disarmament and the peaceful uses of nuclear energy. An FMCT including verification provisions would fulfil an important objective of the 1995 Principles and Objectives and the 2000 Final Document and would instil a new momentum in the overall process of disarmament by creating a single norm applicable to all. It would reinforce the non-proliferation provisions of the NPT (articles I and II) and strengthen the international non-proliferation regime as a whole by applying also to States not parties to the NPT. Such an FMCT would also have beneficial consequences beyond those that directly pertain to nuclear non-proliferation and disarmament, such as contributing to regional stability, in particular in South Asia, the Korean peninsula and the Middle East. It could also reduce the risk of theft or diversion of fissile material to terrorist groups or activities. This last consideration is increasingly pertinent in today's security environment, where the risk of nuclear terrorism has become a global challenge.

The EU reiterates the need for an immediate commencement of FMCT negotiations in the Conference on Disarmament without preconditions. Pending the entry into force of an FMCT, the EU calls on all States concerned to declare and uphold a moratorium on the production of fissile material for nuclear weapons or other nuclear explosive devices. The EU welcomes the fact that four nuclear-weapon States have decreed such a moratorium.

The EU also calls on all States concerned to dismantle, in a transparent manner, their capacities dedicated to the production of fissile material for nuclear weapons. The dismantlement of such production capacities is a strong signal of irreversible renunciation of such production. In this respect, the EU welcomes the ongoing dismantlement by France of the Pierrelatte and Marcoule facilities, as well as the recent visits organized for Conference on Disarmament member States and for non-governmental experts to these facilities, which constitute an important transparency measure. The EU would welcome any such decision by other States.

A new momentum on starting FMCT negotiations is developing. We call on all parties to make these negotiations possible. Therefore, States parties participating in the Third Preparatory Committee for the 2010 Review Conference are invited to recognize the relevance of the negotiation and early entry into force of a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices as an instrument of nuclear disarmament, in accordance with article VI of the NPT. The Third Preparatory Committee is invited to endorse this relevance in its recommendations to the Review Conference. States parties to the NPT that are members of the Conference on Disarmament are urged to assume their responsibility and support the start of negotiations on such a treaty in the Conference on Disarmament without preconditions.

The EU will keep its position concerning an FMCT under constant review, taking into account in particular developments in the NPT and Conference on Disarmament contexts.

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Nuclear disarmament: France's practical commitment

Working paper submitted by France

"Rather than making speeches and promises that are not translated into deeds, France takes action". (Speech delivered in Cherbourg on 21 March 2008)

1. France's action in the areas of proliferation prevention, arms control and disarmament is based on steadfast principles: working for a safer world and a fairer international order founded on the rule of law and collective security; preventing threats against peace; respecting the right to self-defence; refusing to engage in the arms race; and working towards general and complete disarmament. In accordance with the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) regarding nuclear disarmament and general and complete disarmament, which it has endorsed, France has adopted significant unilateral measures (see annex). As pointed out by the President of the Republic on 21 March 2008 in the speech that he gave in Cherbourg, France founds its doctrine of deterrence on the principle of strict sufficiency. France has always sought to maintain its nuclear arsenal at the lowest possible level compatible with the strategic context.

I. Action taken by France

2. France has an exemplary record, unique in the world, with regard to nuclear disarmament. It was the first State, together with the United Kingdom of Great Britain and Northern Ireland, to have signed and ratified the Comprehensive Nuclear-Test-Ban Treaty (CTBT); the first State to have decided to shut down and dismantle its facilities for the production of fissile materials for nuclear weapons; the only nuclear-weapon State to have dismantled, in a transparent manner, its nuclear test site in the Pacific; the only State to have dismantled its ground-to-ground nuclear missiles; and the only State to have voluntarily reduced the number of its nuclear-powered ballistic missile submarines by a third.

II. Decisions taken by France

3. In 2008, the President of the Republic announced that France would reduce by a third the number of nuclear weapons, missiles and aircraft in its airborne component.

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Following that reduction, France's total arsenal will comprise fewer than 300 nuclear warheads, that is, half the maximum number of warheads that it had during the cold war. In providing this information, France is completely transparent, as it has no other weapons besides those in its operational stocks.

4. As another demonstration of a desire for transparency, the President of the Republic decided to invite international experts to observe the dismantlement of the Pierrelatte and Marcoule facilities for the production of fissile materials for nuclear weapons. France organized this visit on 16 September 2008 for representatives of more than 40 member States of the Conference on Disarmament, and on 16 March 2009 for non-governmental experts. This was the first time a nuclear-weapon State had opened the doors of its former military nuclear facilities.

5. In addition, France has consistently and explicitly worked towards disarmament at the international level. During its Presidency of the European Union in 2008, France was firmly committed to enabling Europe to develop for the first time ambitious initiatives in this field.

III. What France and its European partners propose

6. On the basis of the proposals made by its head of State in Cherbourg, France, together with its European partners, presented a disarmament plan of action with a view to the upcoming 2010 NPT Review Conference, which was endorsed by the European Union's 27 heads of State and Government in December 2008:

- Universal ratification of the CTBT and completion of its verification regime, and dismantling, as soon as possible, of all nuclear testing facilities, in a manner that is transparent and open to the international community
- Immediate opening, without preconditions, of negotiations on a treaty banning the production of fissile materials for nuclear weapons and observance of an immediate moratorium on the production of such materials
- Development of confidence-building and transparency measures by the nuclear Powers
- Further progress in the discussions under way between the United States of America and the Russian Federation on the development of a legally binding post-START arrangement (negotiations on the Treaty on the Reduction and Limitation of Strategic Offensive Arms), and overall reduction of global nuclear-weapon stockpiles pursuant to article VI of the NPT, in particular by the States with the biggest arsenals
- Inclusion of tactical nuclear weapons, by those States that have them, in general arms control and disarmament processes, with a view to their reduction and elimination
- Opening of consultations on a treaty banning short- and intermediate-range ground-to-ground missiles
- Universal subscription to and implementation of the Hague Code of Conduct
- Mobilization in all other areas of disarmament.

Annex

Nuclear disarmament: France's practical commitment

Action taken by France

Type of measure	*Action taken*	*Comments*
Scaling down of deterrent forces since the end of the cold war	• Complete dismantling of ground-to-ground component • Scaling down of naval component: reduction in the number of active ballistic missile submarines from six to four • Scaling down of airborne component: – Early withdrawal of the AN52 nuclear bombs carried by Jaguar and Mirage III aircraft – Removal of strategic Mirage IV aircraft from nuclear missions • As announced in 2008, reduction by one third of the number of nuclear weapons, missiles and aircraft in the airborne component, bringing France's total arsenal to fewer than 300 nuclear warheads	"France applies a principle of strict sufficiency. It maintains its arsenal at the lowest possible level compatible with the strategic context" (Cherbourg speech, 21 March 2008). Of the nuclear-weapon-States that have deployed ground-to-ground nuclear-weapon systems, France is the only one to have eliminated the latter completely. Taking into account the mea ures announced by the President of the Republic on 21 March 2008, the number of nuclear weapon delivery vehicles has been reduced by more than half since 1985. **We propose opening consultations on a treaty prohibiting short- and medium-range ground-to-ground missiles.**
Modification of the operational characteristics of nuclear forces	• De-targeting announced in 1997 subsequently reaffirmed on several occasions, most recently in 2008 • Reduction of alert status of the two components in 1992 and 1996. These alert level reductions affected both the response times of forces and the number of weapons systems	"When international security improves, France acts accordingly [...] **I can confirm that none of our weapons are targeted against anyone**" (Cherbourg speech).
Cessation of production of fissile materials for nuclear weapons	• Cessation of plutonium production in 1992, and of highly enriched uranium in 1996 • Decision to decommission and dismantle the relevant installations at Pierrelatte and Marcoule. The dismantling process is currently being implemented and entails a cost of €6.1 billion, €1.6 billion of which have already been invested	France is the only State that has decided to dismantle the facilities for the production of fissile materials for nuclear weapons and has implemented that decision. We call for the immediate opening of negotiations without preconditions on a **treaty banning the production of fissile materials for nuclear weapons**. We also call upon all concerned States to **dismantle their production capabilities**. **We call for the establishment of a moratorium on the production of such materials with immediate effect.**

Type of measure	*Action taken*	*Comments*
Cessation of nuclear testing	• Definitive cessation of nuclear testing announced on 20 January 1996 • Dismantling of the facilities at its Pacific testing centre announced in 1996 and completed in late July 1998 • Support for the Comprehensive Nuclear-Test-Ban Treaty (CTBT), signed by France on 24 September 1996 and ratified on 6 April 1998. Active technical and financial support to the CTBT Provisional Technical Secretariat	The only nuclear-weapon State which has closed and dismantled its nuclear testing centre. France today no longer has facilities allowing it to carry out nuclear tests. **We call for the dismantling of all nuclear testing sites, in a manner that is transparent and open to the international community.** **We call for the universal ratification of the CTBT** as well as for the completion of its verification regime.
Transparency	• Doctrine: speech by the President of France delivered on 21 March 2008 explaining the French deterrence doctrine • Capacities: the **total** French arsenal will contain **fewer than 300 nuclear warheads**. Announcement that France has no nuclear arms in reserve • Unprecedented visit by the member States of the Conference on Disarmament (16 September 2008) and non-governmental experts (16 March 2009) to the former Pierrelatte and Marcoule facilities for the production of fissile materials for nuclear weapons	"I have also decided that France could and should be more transparent with respect to its nuclear arsenal than anyone ever has been. After this reduction, our arsenal will include fewer than 300 nuclear warheads. That is half of the maximum number of warheads that we had during the cold war. In giving this information, France is being completely transparent because it has no other weapons besides those in its operational stockpile" (Cherbourg speech). **France is observing the rules of transparency, which builds confidence.** We hope that others will join us on this path. **The pursuit of disarmament is based on trust, transparency and reciprocity. We call upon the nuclear powers to agree upon measures of transparency and trust.**

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Nuclear disarmament: a concrete step by France

Visit to France's former fissile material production facilities for nuclear weapons

Working paper submitted by France

1. France organized visits to its former fissile material production facilities for nuclear weapons at Pierrelatte and Marcoule, on 16 September 2008 by representatives of more than 40 States members of the Conference on Disarmament, and on 16 March 2009 by more than 20 non-governmental experts.

2. The visits fulfilled a commitment made by the French President in a speech given at Cherbourg on 21 March 2008 on defence policy, nuclear deterrence and disarmament. In that speech, the President made innovative proposals regarding disarmament. He also showed his desire for transparency by deciding inter alia to invite international experts to come to see the dismantling of the former fissile material production facilities for nuclear weapons at Pierrelatte and Marcoule.

3. During the tours, the participants had access to the former uranium enrichment plant at Pierrelatte and, at the Marcoule site, they visited one of the three plutonium-producing reactors being dismantled, as well as the former military reprocessing plant. They were thus able to see that France's decision, made in 1996, to cease all production of fissile material for its nuclear weapons and to dismantle its Pierrelatte and Marcoule facilities used for that production, has become a concrete and effective reality.

4. The visits were an unprecedented act of transparency on the part of a nuclear-weapon State, in that they constituted the first instance of such a State opening the doors of its former fissile material production facilities for nuclear weapons.

5. The initiative shows France's will to forge ahead in nuclear weapons fissile material cut-off, a priority in the disarmament process with the entry into force of the Comprehensive Nuclear-Test-Ban Treaty. As the international experts who participated in the visit saw, the dismantling of the French facilities at Pierrelatte and Marcoule is indeed irreversible.

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6. This event also demonstrates France's commitment to continue making active and practical contributions to disarmament, at both the national and international levels. Under the auspices of the French presidency of the European Union, Europe for the first time developed ambitious initiatives on disarmament. With a view to the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, the European Union presented an action plan for disarmament, based on proposals made in Cherbourg, that was endorsed by the 27 Heads of State and Government of the European Union in December 2008.

7. In the action plan, France, together with its European Union partners, calls for the immediate start of negotiations without preconditions on a fissile material cut-off treaty and the observance of an immediate moratorium on the production of fissile materials. We also urge all States concerned to dismantle their fissile material production facilities. France hopes that the international community will join the European Union in supporting and carrying out this realistic and concrete plan of action.

8. As underlined by the President of the Republic in his speech in Cherbourg, France's commitment to disarmament is not limited to speeches and promises, but is translated into concrete action. France acts with transparency, and in doing so, builds confidence. The visits to Pierrelatte and Marcoule give further evidence of this. France hopes that other States will take similar action, as the commitment of all States is necessary for progress in the area of disarmament. Continued progress depends on trust, transparency and reciprocity.

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Japan's activities in technical cooperation related to the peaceful uses of nuclear energy

Working paper submitted by Japan

I. Overview

1. As a country with scarce natural resources, Japan has attached vital importance to the peaceful uses of nuclear energy. It launched commercial uses of nuclear energy, in addition to research and development activities, at a very early stage, and has since then continuously pursued their advancement. As a result, the Japanese nuclear industry is now renowned for its highly advanced, cutting-edge technologies.

2. Science and technology are the foundations of the prosperity of Japan. Japan, both in its private and public sectors, has invested heavily in the development of advanced technologies. The ratio of expenditures in these domains to GDP is among the highest in the world.

3. Japan has conducted technical cooperation within areas including nuclear applications, nuclear safety/security, nuclear power, and safeguards, and has been sharing the benefits of these technologies with other countries through various activities, including IAEA technical cooperation.

4. Some examples of Japanese technical cooperation are outlined below.

II. Cooperation by areas

A. Nuclear applications

1. Human health

5. Nuclear applications have an important role to play in promoting human health. According to the World Health Organization (WHO), cancer is the biggest cause of death worldwide and accounted for 7.9 million deaths (around 13 per cent of all deaths) in 2007.

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6. Japan has always supported the Program of Action for Cancer Therapy (PACT) of IAEA. In 2006, Japan took the initiative to establish a mechanism to address the financial difficulties which endangered PACT. Through this mechanism, Japan has contributed $345,000 to PACT. It also made available to IAEA a very prominent medical doctor to support the work undertaken within PACT.

7. Japan is also making efforts nationally to share its experience with other countries in the field of cancer therapy. Being the host country of the fourth Tokyo International Conference on African Development, Japan organized a technical tour at the beginning of 2008 for African countries. This tour enabled the participants to be familiarized with our activities in cancer radiotherapy technology development. Responding to the interest shown by the participants, the Japan International Cooperation Agency decided to hold a basic training course on radiation therapy technology, which covered topics ranging from radiation diagnosis, including positron-emission tomography, to heavy particle radiotherapy. Japan has already welcomed trainees from African countries as a follow-up to the technical tour.

8. The heavy particle cancer radiotherapy technology is a form of radiation therapy that employs accelerated beams and has comparative advantages over other forms of cancer treatment in three regards. It makes possible:

- First, the treatment of delicate parts of the body such as the head, the neck, bones and soft tissue.
- Second, the reduction of therapy duration.
- Third, the alleviation of physical burdens on patients when compared with the surgical removal of cancers.

Japan is one of the leading countries in the field of heavy particle cancer radiotherapy technology. The National Institute of Radiological Science has been promoting this technology and has also constructed the world's first heavy ion medical accelerator, known as HIMAC. Gunma University is now constructing a second one. Both the National Institute of Radiological Science and Gunma University actively welcome trainees from abroad.

9. Japan's cooperation in the field of human health is not limited to cancer therapy. Since 2005, Japan has been acting as project lead country in human health under the Regional Cooperative Agreement for Research, Development and Training in the Asia and Pacific Region (RCA), and over 300 trainees have so far participated in training courses for human health under the auspices of RCA. Those activities are closely linked to those of the Forum for Nuclear Cooperation in Asia, a framework that was initiated by Japan. A manual for trainees prepared by the Forum has, for instance, been widely used in a number of RCA training courses. This can be viewed as one example of fruitful partnership among different international forums.

10. The National Institute of Radiological Science mentioned above has an IAEA collaborating centre, which has also extended, in a structured way, assistance for IAEA research and training activities in the field of biological consequences of low-dose radiation.

2. Food and agriculture (radiation applications in the field of food and agriculture, inter alia, the sterile insect technique)

11. Japan has a unique experience with regard to the sterile insect technique. This episode dates back to 1972, when the administrative rights over Okinawa, an island in the southern part of Japan, were returned to Japan. Okinawa has a semi-tropical climate and is famous for its exotic fruits and vegetables, one of which is the bitter gourd, also known as "the king of the summer vegetables" due to its wealth in vitamin C. Once this reversion was effectuated, Okinawa was eager to make shipments of bitter gourds across the country. However, by 1972 the native melon fly had done substantial harm to bitter gourd crops, and Japan at the time had a law banning the shipment of plants affected by parasites from Okinawa to the rest of the country. In an effort to overcome this issue, the Government of Japan decided to make use of the sterile insect technique in 1975. Those efforts culminated in the eradication of the melon fly in Okinawa, ultimately allowing all people across the country to enjoy these nutrient-rich bitter gourds. Even now, in parts of Okinawa and elsewhere, Japan is working to combat and eradicate the sweet potato weevil, an insect harmful to the sweet potato, using the sterile insect technique.

12. As Japan has these experiences of its own, it is eager to cooperate with other countries struggling with similar challenges. The sterile insect technique can be of great help to livestock management in Africa, through the eradication of the tsetse fly and other harmful insects. In 2006, the Government of Japan and the United Nations extended assistance totalling $1.76 million through the Trust Fund for Human Security, to a tsetse fly eradication project in Ethiopia, implemented by IAEA in partnership with the Food and Agriculture Organization of the United Nations. (The project is entitled "Establishing a zone free of the tsetse and trypanosome problem in the Southern Rift Valley, Ethiopia, and assisting rural communities in agricultural and livestock development".) It is expected that these major threats affecting agriculture in the region will be eliminated, and that livestock, agricultural and overall development in the Southern Rift Valley of Ethiopia will be accelerated. In our view, this project merits special attention, because it exemplifies good partnership between a country, IAEA and other international organizations.

3. Water management

13. Aquatic conservation is essential in the endeavour to attain the Millennium Development Goals. IAEA has a renowned laboratory in Monaco known as the Marine Environment Laboratory, established in 1961. This laboratory has conducted research on environmental issues arising from contamination due to radioactive and non-radioactive sources. Rinnosuke Fukai, who was one of the chemists at the National Institute of Fisheries under the auspices of the Ministry of Agriculture and Forestry of Japan, joined the Monaco Laboratory in 1962. He was the Head of the Radiochemistry Section for 20 years, from 1962 to 1982, and Director from 1982 to 1986. Mr. Fukai contributed significantly to the development of the laboratory, and in particular to the development of water management technology.

14. The IAEA Monaco institute has played an important role in the protection of the marine environment in the far eastern Asian region. In 1993, it was found that liquid radioactive waste originating from dismantled nuclear submarines was dumped off the coast of Vladivostok. In 1994, Japan, the Russian Federation, the

Republic of Korea and the IAEA Monaco institute dispatched a joint mission to monitor the marine environment in the far eastern Asian region. This research ascertained that the marine environment in the region was safe. Nevertheless, as follow-up, a low-level liquid radioactive waste treatment plant was constructed with Japanese assistance, and unpurified liquid radioactive waste has never been dumped since. As an additional follow-up activity, Japan launched a project in 2003 for the dismantling of nuclear submarines in the far-east region of the Russian Federation, in partnership with the Russian Federation, Australia, New Zealand and the Republic of Korea, for the purpose of nuclear disarmament and non-proliferation in addition to marine environmental protection in this area. This project was named "Star of Hope" after the shipyard Zvezda (meaning "star" in Russian) where the project was initiated

15. Japan hosted the 31st meeting of national RCA representatives in April 2009, which was attended by representatives from 14 countries. Extensive discussions were held on follow-up activities, and on a future medium-term strategy of RCA for the further promotion of nuclear science and technology.

B. Nuclear safety/security

16. Japan has made a number of notable contributions in the field of nuclear safety and security also.

17. After the Chernobyl accident, the Japanese regulatory body invited over 1,000 nuclear power operation trainees from Eastern European countries, China and the Russian Federation to share Japanese experiences and knowledge on nuclear power operation safety. Japan is now further expanding its activities relating to the improvement of nuclear power operation safety in the Asian region.

18. Japan has assisted the community affected by the Chernobyl accident in Ukraine through the Human Security Fund established at the United Nations, and contributed a further $2.6 million to support projects in Ukraine, Belarus and the Russian Federation in 2008. These projects provide affected communities with necessary health and environmental information.

19. Following the Chernobyl accident, Japan has contributed a total of $89 million to the Nuclear Safety Account and to the Chernobyl Shelter Fund to help enhance the safety of the Chernobyl nuclear power plant. In 2000, as the then Chair of the G-8 Nuclear Safety Working Group, Japan took leadership in shutting down the Chernobyl nuclear power plant. In 2008, as the G-8 Chair, Japan organized a pledging event for the Nuclear Safety Account in order to fill financial gaps.

20. With regard to Asia, Japan, in cooperation with IAEA, has been highlighting issues relating to nuclear safety infrastructure in Asia since 1990. Notably, the Asian Nuclear Safety Network was established in collaboration with IAEA and like-minded IAEA member States, with a view to sharing nuclear safety information and facilitating human development for nuclear safety in the region. High expectations have been placed on the Network, as a nuclear safety network model.

21. Following the earthquake that hit the Niigata Prefecture, Japan, in July 2007, Japan learned numerous lessons with regard to the improvement of seismic safety in nuclear power plants. Bearing in mind that some earthquake-prone countries are now initiating nuclear power programmes, Japan has invited IAEA missions and has held workshops in order to share its experiences and lessons learned with regard to

seismic safety. IAEA, with Japan's full cooperation, has also established an international nuclear seismic safety centre in Vienna. These initiatives will contribute to the improvement of seismic safety of nuclear power plants globally.

22. Japan has made substantial efforts to help enhance nuclear security in Kazakhstan, both bilaterally and in collaboration with IAEA. In response to requests by the Public Health Committee of Kazakhstan, Japan implemented, in full cooperation with the Medical Department of Nagasaki University, a variety of measures to mitigate the suffering of those who had been exposed to nuclear radiation in the area surrounding the nuclear test site in Semipalatinsk, Kazakhstan, set up during the Soviet era. In 1999, Japan provided a remote diagnostic system to Semipalatinsk Medical University and radiation measurement devices to the Semipalatinsk Research Institute of Radiology and Environment.

C. Nuclear energy

23. Since the Chernobyl accident two decades ago, the nuclear industry has faced numerous challenges. Japan has vigorously continued its research and development activities on nuclear power, while maintaining a high level of safety. Consequently, cutting-edge technology for light-water reactors has been developed. Japanese industry, for example, plays a vital role in providing large components for nuclear reactors such as pressure vessels.

24. In 1999, Japan established the Forum for Nuclear Cooperation in Asia to facilitate nuclear cooperation in Asia. The Government of Japan has worked to contribute to pre-feasibility studies for the introduction of nuclear power in Viet Nam.

25. Japan has contributed over $800,000 towards IAEA nuclear infrastructure development activities. In August 2008, Japanese experts were made available to IAEA for the purpose of nuclear infrastructure development.

26. Japan aims to develop a nuclear fuel cycle centring on light-water reactors. To complete this cycle, Japan has made strenuous efforts in research and development, with fast-breeder development at the cornerstone. Overcoming the sodium leakage accident in 1995, the "Monju" prototype fast-breeder reactor is expected to resume operation soon. Japan has been sharing research results and data acquired from its research and development activities, including those relating to the Monju reactor and the experimental fast reactor known as "Joyo", with member States at various IAEA meetings.

27. In the field of fusion energy research, Japan participates in the ITER project, contributing to it in terms of financing, of providing research devices and of dispatching researchers and engineers.

D. Safeguards technology

28. Japan is equipped with one of the largest and the most complex nuclear fuel cycles in the world, and has gained substantial experience in relation to safeguards. Japan virtually represents a large-scale experimental field for safeguards technology. The Rokkasho Reprocessing Plant has, for instance, been placed under a "continuous safeguarding system", which was jointly developed by Japan and IAEA. In addition, the construction of the MOX fuel fabrication plant (J-MOX) will

be guided by the concept of "safeguards by design". This plant is expected to offer one of the models for random interim inspection and remote verification.

29. Japan has also been trying to improve the efficiency of safeguards, while maintaining their effectiveness, by using the latest advanced technology and statistical approaches. In fact, the integrated safeguards approach employed at one of the Japan Atomic Energy Agency's nuclear facility complexes is expected to reduce the human resources necessary for inspections by 30 per cent. This new approach will soon be widely used across Japan.

30. Japan has an impeccable record in satisfying the highest standard of IAEA safeguards and enjoys the confidence extended to it by the international community. Japan and IAEA have together expanded the frontiers of safeguards technology. Japan is intent on continuing to play a leading role in this field.

III. Conclusion

31. Japan has a wide range of nuclear technologies for peaceful purposes and is ready to cooperate, with both developing and developed countries, in diverse areas such as nuclear applications, nuclear safety/security, nuclear power, and safeguards, among others.

32. Japanese technologies are still relatively unknown among the States parties to the Non-Proliferation Treaty and are not being utilized in line with their full potential. It is in the interest of all States parties to make further use of these technological resources.

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Nuclear power development: meeting the world's energy needs and fulfilling article IV

Working Paper submitted by Canada, Estonia, France, Poland, the Republic of Korea, Romania, Ukraine and the United Kingdom of Great Britain and Northern Ireland

1. In the past few years, nuclear power has generated renewed interest as a way of meeting the world's energy needs, as shown inter alia by the Paris conference in 2005,[1] the Beijing conference in April 2009,[2] and the resolutions on nuclear power applications adopted since 2006 by the General Conference of the International Atomic Energy Agency.[3] These new perspectives are highly relevant to the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons. Indeed, power applications are an essential part of the peaceful uses of nuclear energy foreseen in article IV, and international cooperation in this field is a major component of the implementation of the Treaty. A large number of countries strongly support the development of peaceful uses for power and other applications, and are committed to working towards the fullest implementation of article IV.

2. The Treaty acknowledges the inalienable right to develop research, production and use of nuclear energy for peaceful purposes, in conformity with articles I and II of the Treaty. This underscores the importance of strict observance of article III in order to ensure compliance with articles I and II and the overarching non-proliferation objectives of the Treaty. Exercising the right to the benefits of nuclear energy must be available to all States pursuing in good faith a nuclear programme for peaceful purposes in accordance with their international obligations.

[1] International Ministerial Conference on Nuclear Power for the twenty-first Century, Paris, 21-22 March 2005.

[2] International Ministerial Conference on Nuclear Energy in the twenty-first Century, Beijing, 20-22 April 2009.

[3] GC(50)/RES/13, sect. B, GC(51)/RES/14, sect. B.1 and GC(52)/RES/12, sect. B.1.

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Growing world energy needs

3. A dramatic increase is foreseen in world energy needs in the twenty-first century. Meeting these needs is essential, as energy supply is a condition of the world's sustainable development, and particular consideration must be given to the needs of developing countries. In this perspective, a diverse portfolio including all energy sources and, in particular, the responsible use of nuclear energy will be needed to allow access to sustainable energy and electricity resources in all regions of the world.

4. At the same time, the essential need to ensure sustainable development of the world is more and more widely recognized as an absolute priority. The health of the planet's environment and energy security are serious concerns. Managing global environment issues in a sustainable manner, including by curbing air pollution and addressing the risk of climate change, must be regarded as a priority by all Governments.

The potential of nuclear technology to meet world energy needs

5. The renewed growth of nuclear power and interest in its potential to help meet the world's energy needs have been broadly recognized, inter alia in the IAEA General Conference resolutions and in the concluding statement of the Beijing Conference, which affirmed that nuclear energy, as a proven, clean, safe, competitive technology, would make an increasing contribution to the sustainable development of humankind throughout the twenty-first century and beyond. Many countries have been conducting nuclear power programmes for several decades, as a result of which nuclear power currently provides 16 per cent of world electricity supply, and they have undertaken to pursue the development of their capacities and to promote the worldwide development of nuclear power to meet energy needs.

6. In addition, nuclear power receives increasing interest from a number of countries currently without nuclear power, which have plans for or are considering developing their use of this energy source. In particular, many developing countries see nuclear power as a useful option in their energy mix to diversify sources of supply and enhance security in support of their socio-economic development.

7. The Paris and Beijing conferences and the General Conference resolutions have also recognized that nuclear power can make a crucial input to the sustainable development strategies of many countries, as nuclear power does not generate air pollution or greenhouse gas emissions.

8. In addition to electricity production, water desalination can be an important resource for countries facing problems of supply of potable water, and nuclear production of hydrogen offers a major potential for the development of hydrogen-based systems.

9. Nuclear power is an advanced and proven technology, with a record of safe and reliable production and improving performance. It enjoys a robust industrial and market base, with industrial companies from many countries in all regions of the world involved in global energy technology markets. The market for equipment and fuel is diversified and effective. In particular, the uranium market is based on a diversified geographical base, which includes developing countries.

10. Nuclear power is economically competitive under many circumstances. It contributes to the stability of energy prices and reduces dependence on fluctuating fossil fuel prices, as fuel and operating expenses represent a smaller part of the total cost of nuclear power, as compared with other energy sources. Nuclear power is a long-term investment for sustainable development, and its financing must be considered from this perspective. In particular, nuclear power should be given equal access to international financing mechanisms supporting sustainable socio-economic development.

The framework for nuclear energy development

11. The development of nuclear energy takes place in a robust international framework, in which the Treaty and the adherence to international norms play a central role. For the responsible development of nuclear energy, non-proliferation, safeguards, safety and security must be issues of primary importance.

12. It must proceed in a manner ensuring non-proliferation objectives and international peace and security. Article IV of the Treaty provides a framework for meeting these objectives. The exercise by a non-nuclear-weapon State of its right to develop the activities necessary to enjoy the benefits of nuclear power is subject to the respect of its non-proliferation commitments under articles I, II and III of the Treaty and to the pursuit in good faith of peaceful purposes.

13. As proliferation risks and non-compliance situations are a major challenge today in the implementation of the Treaty, preventing proliferation must be a paramount priority for all parties. The IAEA safeguards have played a central role in ensuring the compliance of States with their non-proliferation obligations, and it is therefore essential to the sustained utilization of nuclear energy that IAEA maintain effective safeguards on nuclear material and activities of States. States should also pay due attention to export control of nuclear material, equipment and technology and exert particular vigilance with regard to sensitive nuclear material, equipment and technology with proliferation potential.

14. In order to maintain the highest nuclear safety levels, all States having or developing a nuclear power programme should give due consideration to nuclear safety and, in particular, to the application of the IAEA safety standards. They should take into account the importance of international cooperation for the enhancement of the nuclear safety regime and of nuclear safety worldwide and, in this regard, adhere to the international safety conventions concluded under the auspices of IAEA.

15. As nuclear security is a national responsibility, all States must make the necessary arrangements to ensure the highest level of security of nuclear material and facilities. They should also give a high priority to international cooperation, which provides common references and benchmarks and facilitates capacity-building and continual enhancement, in particular through adhering to the Convention on the Physical Protection of Nuclear Material.

16. The development of nuclear power must take due account of public acceptance issues and be carried out in a manner that addresses the expectations and concerns of citizens.

17. Solutions exist for the safe and secure management of spent fuel and radioactive waste, and research and development is under way for improved

solutions. States have an obligation and responsibility to ensure, from the earlier phases of their nuclear programmes, that appropriate options are provided for the management and disposition of nuclear fuel and must ensure that using nuclear power does not create undue burdens or risks for future generations.

18. International research and development programmes are currently carried out to develop innovative nuclear systems, which are providing increased benefits with respect to economy, safety, waste management and non-proliferation. They can and should bear in mind sustainable development and provide answers to the needs and concerns of society, taking into account the specific situation of each State. The development of new reactor and fuel cycle designs should give due attention to safety, security and proliferation resistance.

National infrastructure for the introduction and development of nuclear energy

19. The responsible and efficient introduction of nuclear power in a country is a major undertaking. To proceed adequately in the framework described above, it must be based on a comprehensive strategy and requires the establishment of appropriate and sustainable national infrastructure to provide the necessary organizational, legal, regulatory, human, technological, industrial and financial framework. To capture the best practices resulting from experience acquired throughout the world, infrastructure guidelines have been developed by IAEA and are well described in its document *Milestones in the Development of a National Infrastructure for Nuclear Power*.[4] Such infrastructure is required to ensure the safe, secure, peaceful, efficient and sustainable application of nuclear power for the benefit of the country and the confidence of the international community.

20. The development of the required infrastructure is a national responsibility that cannot be transferred. However, international cooperation can provide valuable support in this undertaking and should be developed to the largest extent possible between interested countries. It is in particular of great value to help train the necessary workforce. The countries submitting this paper are ready to cooperate in the development of the necessary infrastructure to support the introduction of nuclear power for peaceful purposes.

Furthering the application of nuclear technology to meet energy needs and fulfil article IV

21. International cooperation is central to the development of nuclear energy. As regards bilateral cooperation, many countries are engaged in intense international cooperation through a large number of cooperation agreements.

22. Widespread international cooperation is carried out through various international organizations and programmes, including the Nuclear Energy Agency of the Organization for Economic Cooperation and Development, the European Union and programmes such as those conducted under the Generation IV International Forum and the International Thermonuclear Experimental Reactor project.

[4] IAEA Nuclear Energy Series No. NG-G-3.1, 2007.

23. International initiatives have been launched to foster the development of nuclear energy to meet growing energy needs. One such initiative, the Global Nuclear Energy Partnership, comprises 25 countries sharing a common vision of the sustainable, safe and secure expansion of nuclear energy for peaceful purposes. It aims to accelerate the development and deployment of advanced nuclear systems, to facilitate the development of national infrastructure and to establish a reliable fuel assurance framework.

24. The International Ministerial Conference on Nuclear Energy in the twenty-first Century, held from 20 to 22 April 2009 in Beijing, provided the opportunity to review at a high level the status and rising expectations related to nuclear energy and the conditions for its development in developed and developing countries, and to discuss actions to carry forward the current positive momentum.

25. Vendors and buyers have a common interest and responsibility in the sustainable development of nuclear energy. States should encourage them to pursue active exchanges throughout the life cycle of a nuclear power plant.

26. IAEA plays a central role in international cooperation for the application of nuclear energy, according to its statutory role "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world". IAEA programmes provide a key contribution to promoting and fostering the efficient, safe and secure development and use of nuclear energy for peaceful purposes through international cooperation, including:

(a) By providing global energy analyses that contribute to the objective of fostering sustainable development and protecting the environment and to a greater understanding and a well-balanced picture of the role of nuclear science and technology in a global, sustainable development perspective;

(b) By contributing, in that connection, to the availability of required sources for financing nuclear projects;

(c) By providing support to its member States for the establishment of their national infrastructure for the introduction and development of nuclear power. The IAEA General Conference has adopted resolutions[5] supporting activities in this area, and IAEA has developed a broad range of services to its member States. A large number of them have requested such support, including through technical cooperation projects;

(d) In the continual improvement of nuclear power plant operation, as the principal international forum for the exchange of information and experience in this field among member States and international organizations, such as the Nuclear Energy Agency of the Organization for Economic Cooperation and Development, and non-governmental organizations such as the World Association of Nuclear Operators;

(e) In promoting improvements and advances in nuclear power, fuel cycle and waste technology, in particular through the International Project on Innovative Nuclear Reactors and Fuel Cycles;

[5] GC(49)/RES/12, sect. G, GC(50)/RES/13, sect. B.2 and GC(51)/RES/14, sect. B.1.

(f) In the continual improvement of nuclear safety through the development of safety standards and the review processes of international conventions and cooperative programmes;

(g) In promoting high-level exchanges on and assessment of the contribution of nuclear power to the satisfaction of energy needs, in particular through high-level conferences.

27. In response to the numerous requests received from States interested in starting a nuclear power programme, IAEA also provides major support in energy planning and the evaluation of energy options, in the evaluation of needs and requirements of these States and in the establishment of appropriate technical, human, legal and administrative infrastructure for the development of nuclear power.

28. The technical cooperation programme of IAEA is a key vehicle to provide broad support to developing member States with respect to nuclear power and other applications.

29. Another key issue for international cooperation is how best to provide a framework for the development of nuclear energy applications in a safe, secure and proliferation-resistant manner while reflecting economic reality and the real needs of the recipient countries. With respect to assurances of supply of nuclear fuel and services, in order to complement the high level of security already provided by current market mechanisms, customers should be provided with long-term nuclear fuel supply arrangements, and international efforts should be pursued to establish credible multilateral fuel supply assurances. Various proposals for such assurances have recently been developed, some of which are expected to be considered by the IAEA Board of Governors in the near future.

Conclusion

30. Nuclear applications make a key contribution to sustainable human development objectives through a broad range of benefits in energy supply, food and agriculture, health and medicine and industrial activities.

31. The responsible, sustainable and efficient development of nuclear energy must be carried out in an adequate framework, where safety, security and safeguards are essential elements, and such a framework must be based on effective national infrastructure.

32. Nuclear power has the opportunity to make a major contribution to the satisfaction of national and world energy needs. Beyond being a common undertaking of all States parties to the Treaty, the promotion of the applications of nuclear power is crucial to meeting the challenge of providing sufficient and reliable energy to support the world's sustainable development, for the benefit of all. It lies at the very heart of the vision that was the basis for "Atoms for Peace" and for the Treaty.

33. In that context, international cooperation is an essential element of the development of peaceful uses of nuclear energy, as was foreseen in article IV and supported by strict observance of the obligations contained in articles I, II and III of the Treaty. The countries submitting this paper are committed to engaging in the fullest implementation of article IV. They encourage, support and participate in intense international cooperation to achieve the goals of the Treaty.